

ABSTRACT OF THE DISCLOSURE

An exposure apparatus includes a projection optical system which projects a pattern of a first object (e.g., a reticle) to a second object (e.g., a wafer) by using an exposure beam in order to transfer the pattern from the first object onto the second object, a diaphragm which sets a numerical aperture of the projection optical system, and a mechanism which keeps temperature of the diaphragm substantially constant during an exposure operation by the projection optical system.